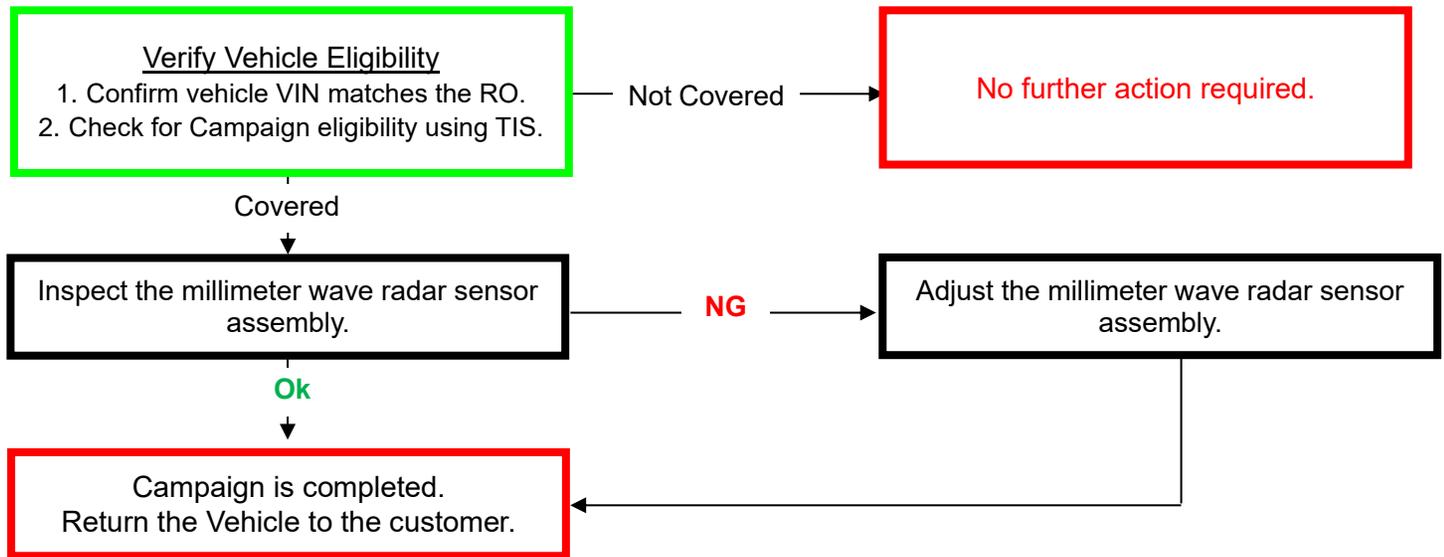


**TECHNICAL INSTRUCTIONS**  
**FOR**  
**SAFETY RECALL 22TA02**  
**PRE-COLLISION SYSTEM (PCS) INOPERATIVE WITHOUT WARNING**  
**INDICATOR**  
**CERTAIN**  
**2021 MODEL YEAR C-HR**

## IX. OPERATION FLOW CHART

The flow chart is for reference only. **DO NOT** use it in place of the full technical instructions. Follow **ALL** steps as outlined in the full technical instructions to confirm the campaign is completed correctly.



## X. IDENTIFICATION OF AFFECTED VEHICLES

### 1. CHECK VEHICLE FOR CAMPAIGN ELIGIBILITY

- Compare the vehicles VIN to the VIN listed on the Repair Order to ensure they match.
- Check the TIS Vehicle Inquiry System to confirm the VIN is involved in this Campaign, and that it has not already been completed.

#### HINT:

TMNA warranty will not reimburse dealers for repairs completed on vehicles that are not affected or were previously completed, even by another dealer.

## XI. PREPARATION

### A. TOOLS & EQUIPMENT

- Techstream
- Tire pressure gauge
- Level
- Tape measure
- Weight with pointed tip (plumb bob)
- Laser line marker

#### SPECIAL SERVICE TOOLS

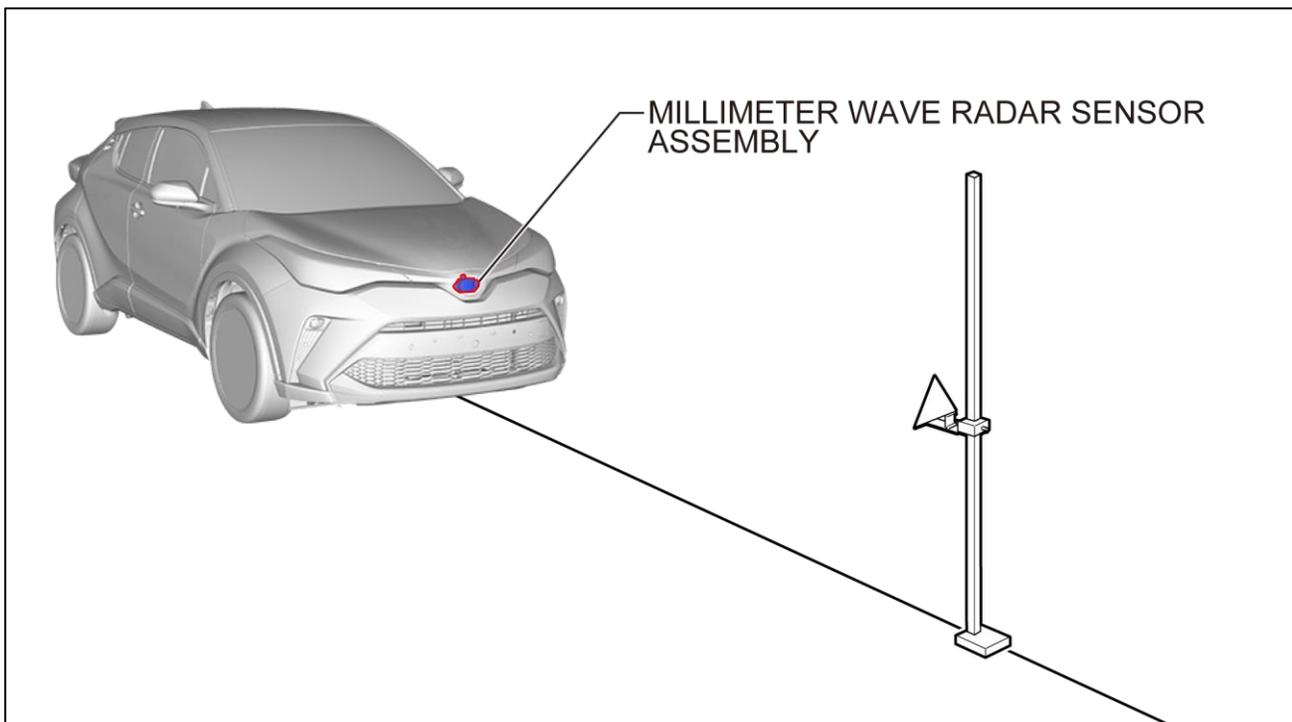
Part Number	Part Name	Quantity	Remarks
09870-60000*	Laser Radar Adjusting Reflector (Kit)*	1	For TRIANGLE TARGET
09870-60100	Flat Target	1	For FLAT SURFACE TARGET
09870-60110	Panel Stand	1	

\*Essential SST

### B. MATERIALS

- String
- Tape

## XII. BACKGROUND



NOTE: Adjustment with triangle target (Laser Radar Adjusting Reflector; Part Number 09870-60000) shown as a representative example.

## XIII. PRE-PREPARATION FOR TSS CHECK TOOL

### 1. PURPOSE OF THIS APPLICATION

- a) The TSS Check Tool is an application that checks the adjustment status of the millimeter wave radar beam axis.

### 2. PC HARDWARE/SOFTWARE REQUIREMENTS

- a) Techstream 2.0 / Techstream ADVI / Techstream Lite with software version 16.3 or greater installed.

### 3. AFFECTED VEHICLE

- a) TSS Check Tool is a limited application only for vehicles covered by Safety Recall 22TA02. Do not use for other vehicles.

### 4. DOWNLOAD TSS CHECK TOOL

**HINT:**

Once downloaded, no download is required from the next time onwards.

- a) [Click here](#) to download TSS Check Tool.
- b) Open the downloaded ZIP file or extract the contents and confirm that the TSS Check Tool folder was created.

## XIV. INSPECT MILLIMETER WAVE RADAR SENSOR ASSEMBLY

**HINT:**

The target is not required to be installed when inspecting with TSS Check Tool.

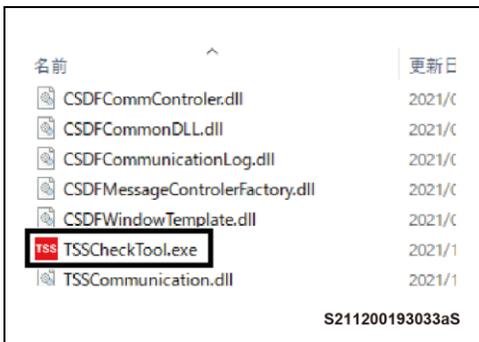


### 1. CHECK FOR DTC'S

- a) Using a Techstream, perform a Health Check to check for Diagnostic Trouble Codes.

**HINT:**

**This campaign covers only the inspection and adjustment of the millimeter wave radar sensor assembly. It does not cover the diagnosis or replacement of any other parts on the vehicle.**



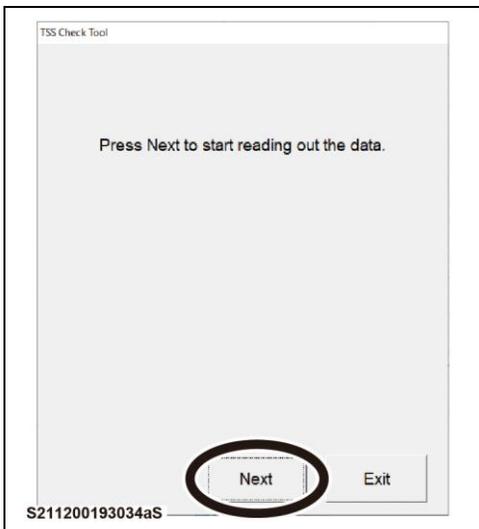
## 2. INSPECT MILLIMETER WAVE RADAR SENSOR ASSEMBLY

- a) Exit Techstream. If any software that uses VIM other than Techstream is running, exit all.

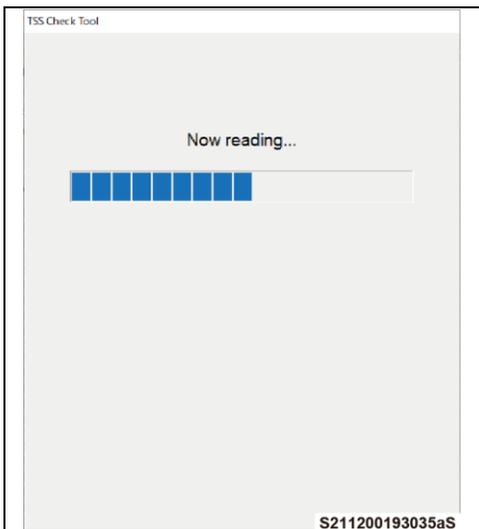
### NOTICE:

**If the inspection is performed without exiting, the inspection result may result in ERROR.**

- b) With PC and VIM (Techstream/Mongoose cable) connected to the vehicle and in IG ON, double-click "TSSCheckTool.exe" in TSS Check Tool folder to start.



- c) Click the Next button.



- d) Wait for communication to finish.

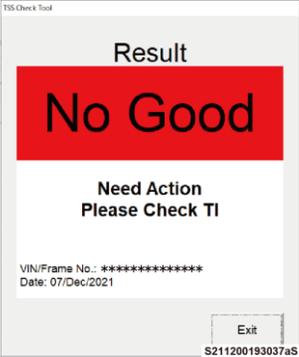


e) When communication with the vehicle is completed, the inspection result is automatically displayed.

f) Confirm the correspondence in the following table based on the display results.

**HINT:**

- The illustration shows "OK" as a representative.
- VINs acquired by communication are displayed in VIN/Frame No. If VIN could not be obtained, it will be blank.
- Date shows the date of the computer.

Judgment	Screen display	Adjustment required/not required	Correspondence/reference destination
OK		Not required	Work completed
NG		Required	<p><b>Take a picture or screenshot</b> of the result, which is required for the warranty claim, then adjust the millimeter wave radar sensor using one of the following procedures:</p> <ul style="list-style-type: none"> <li>• TARGET ADJUSTMENT (TRIANGLE TARGET) (Go to page 7.)</li> <li>• TARGET ADJUSTMENT (FLAT SURFACE TARGET) (Go to page 8.)</li> </ul>
ERROR		-	Refer to Appendix B on page 12 to define error identification numbers. Once the error is resolved, re-execute the TSS Check Tool.

g) Click Exit to exit TSS Check Tool.

## XV.TARGET ADJUSTMENT (TRIANGLE TARGET)

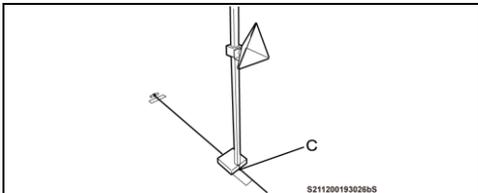
**NOTICE:** Target Adjustment is only needed if the result of TSS Check Tool was "NG". If the result of TSS Check Tool was "NG", follow the instructions in the link below to perform target adjustment.

1. [Refer to TIS for instructions on Engine / Hybrid System / CRUISE CONTROL / MILLIMETER WAVE RADAR SENSOR / TARGET ADJUSTMENT \(TRIANGLE TARGET\)](#)

(RM100000001QFQ1)

### HINT:

If Error No. 1 or No. 8 is stored and the adjustment of the millimeter wave radar axis is not finished after the radiator grille emblem surface is cleaned, clean Millimeter Wave Radar Sensor Assembly (surface of the sensor body).



### HINT:

Install the SST (reflector) by aligning the scribe line of the SST (reflector) with point C as shown in the illustration.

## 2. RECONFIRMATION BY TSS CHECK TOOL AFTER COMPLETING TARGET ADJUSTMENT

- a) Exit Techstream. If any software that uses VIM other than Techstream is running, exit all.

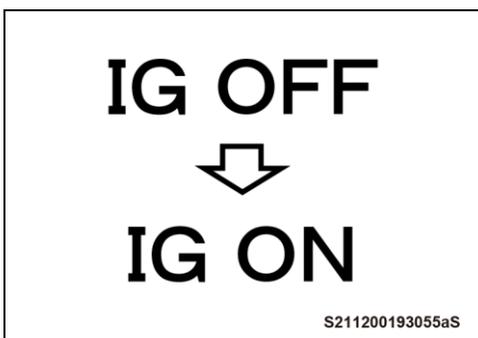
### NOTICE:

If the inspection is performed without exiting, the inspection result may result in **ERROR**.

- b) Turn the IG off (no waiting time required) and IG ON again.

### NOTICE:

Turn the IG off because the content of adjustment is not stored in the millimeter wave radar sensor ASSY unless the IG is turned off. TSS Check Tool is to be executed with the above content stored, otherwise false positives may result.





- c) Execute "TSSCheckTool.exe" again and confirm that the inspection result is "OK".

**NOTICE:**

**If "NG" is displayed on the inspection result, perform the millimeter wave radar axis adjustment again. If "NG" is displayed even after three retries, the ECU may be damaged. Check the relevant ECU by health check, etc.**

- d) Turn the IG off.
- e) Remove Techstream from DLC3.

## XVI. TARGET ADJUSTMENT (FLAT SURFACE TARGET)

**NOTICE:** Target Adjustment is only needed if the result of TSS Check Tool was "NG". If the result of TSS Check Tool was "NG", follow the instructions in the link below to perform target adjustment.

1. [Refer to TIS for instructions on Engine / Hybrid System / CRUISE CONTROL / MILLIMETER WAVE RADAR SENSOR / TARGET ADJUSTMENT \(FLAT SURFACE TARGET\)](#)

(RM100000001QFQ2)

**HINT:**

If Error No. 1 or No. 8 is stored and the adjustment of the millimeter wave radar axis is not finished after the radiator grille emblem surface is cleaned, clean Millimeter Wave Radar Sensor Assembly (surface of the sensor body).

### 2. RECONFIRMATION BY TSS CHECK TOOL AFTER COMPLETING TARGET ADJUSTMENT

- a) Exit Techstream. If any software that uses VIM other than Techstream is running, exit all.

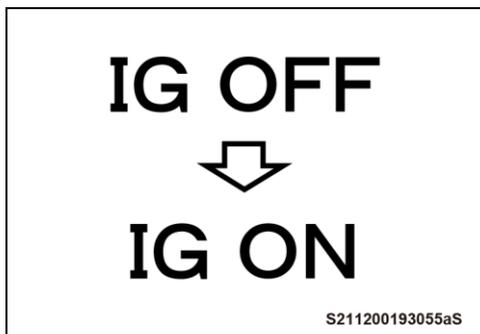
**NOTICE:**

**If the inspection is performed without exiting, the inspection result may result in ERROR.**

- b) Turn the IG off (no waiting time required) and IG ON again.

**NOTICE:**

**Turn the IG off because the content of adjustment is not stored in the millimeter wave radar sensor ASSY unless the IG is turned off. TSS Check Tool is to be executed with the above content stored, otherwise false positives may result.**





c) Execute "TSSCheckTool.exe" again and confirm that the inspection result is "OK".

**NOTICE:**

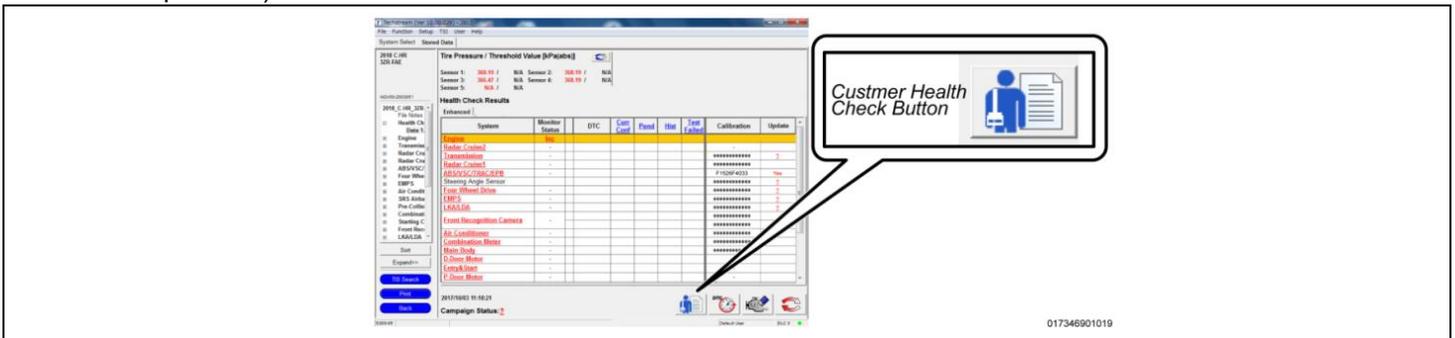
**If "NG" is displayed on the inspection result, perform the millimeter wave radar axis adjustment again. If "NG" is displayed even after three retries, the ECU may be damaged. Check the relevant ECU by health check, etc.**

- d) Turn the IG off.
- e) Remove Techstream from DLC3.

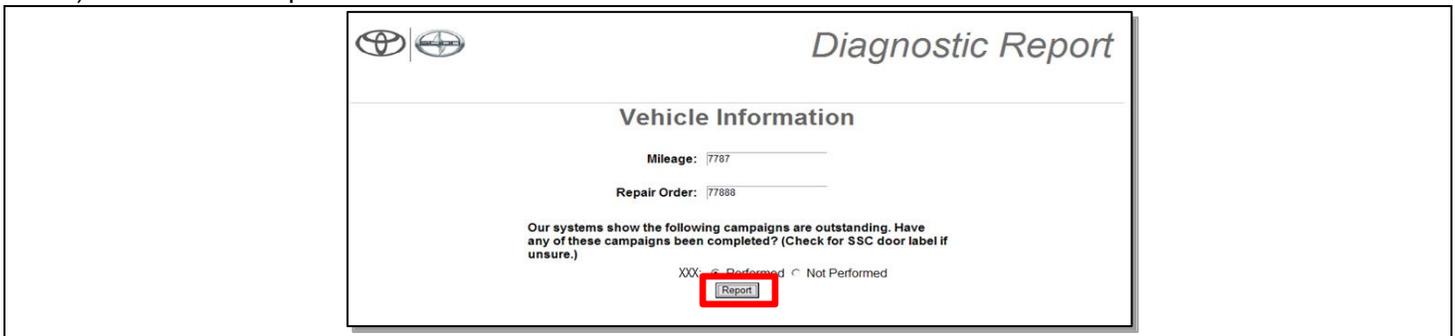
## XVII. WORK COMPLETION

### 1. PRINT CUSTOMER HEALTH CHECK REPORT

a) From the Stored Data tab, select the Customer Health Check Report button (TIS will launch when button is pressed).



- b) Log in to TIS.
- c) Input Vehicle Mileage and Repair Order number.
- d) Check the "Performed" campaign radio button for the applicable campaigns completed during this service event.
- e) Select the Report button.



f) Confirm Customer Health Check Report information is correct.



# Diagnostic Report

## Vehicle Information

Vehicle: XXXXXXXXXXXX  
Repair Order: 12345

VIN: XXXXXXXXXXXXXXXXXXXX

Mileage: 13672

## Health Check Summary

Checkpoints	Status	Comments
Powertrain	All systems OK	
Chassis	All systems OK	
Electrical	All systems OK	
Network Systems	All systems OK	
Service Campaigns	No Action Required	XXX Performed

Performed: XX/XX/XX, X:XX XX (PST)

\_\_\_\_\_  
Technician Signature

\_\_\_\_\_  
Quality Inspector Signature

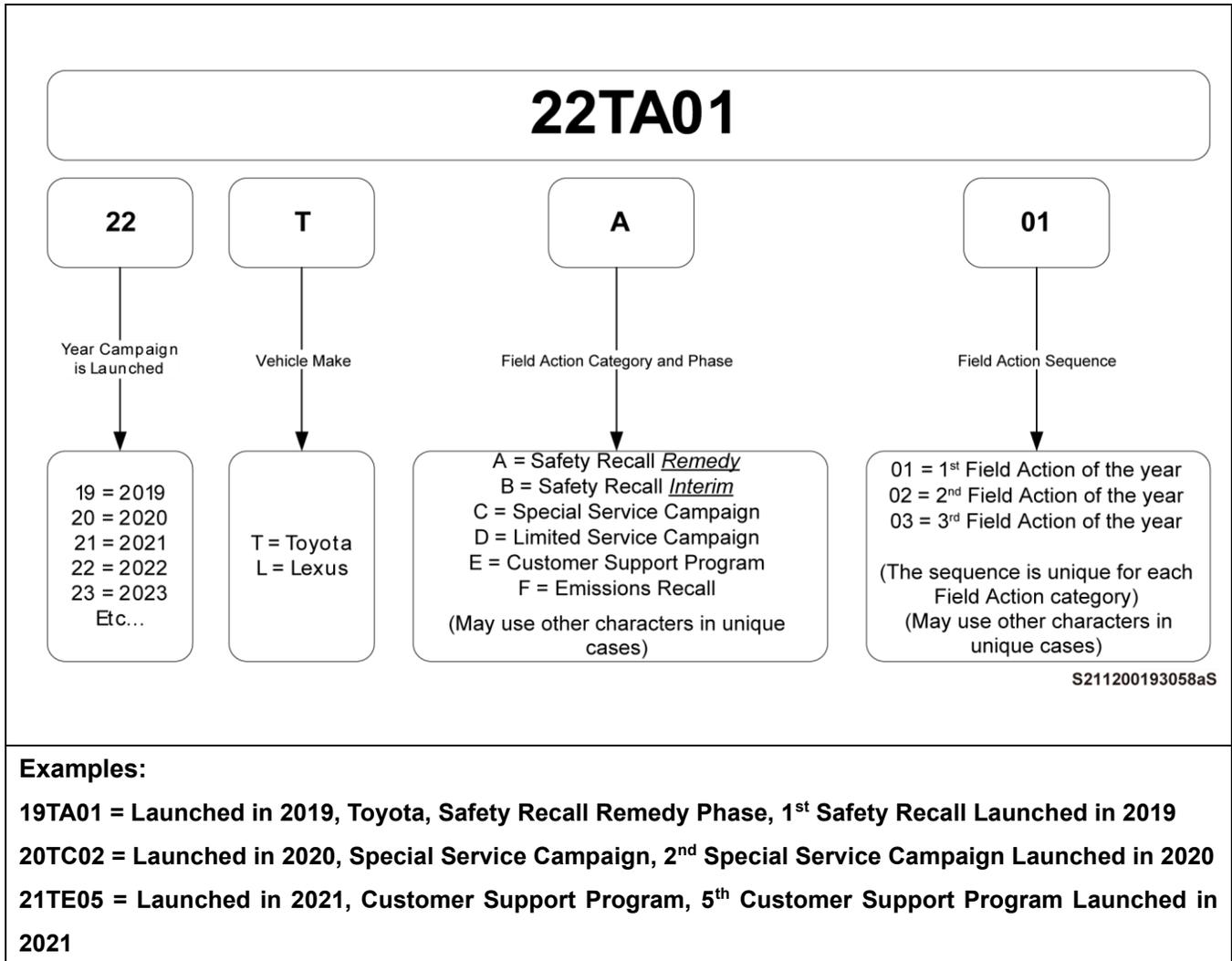
- g) Print Customer Health Check Report from TIS.
- h) Sign and provide to the customer.

### ◀ VERIFY REPAIR QUALITY ▶

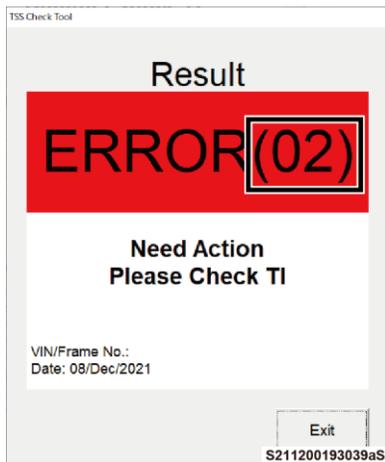
- Confirm that the millimeter wave radar sensor has been properly initialized, if necessary.
- If you have any questions regarding this recall, please contact your regional representative.

# XVIII. APPENDIX

## A. CAMPAIGN DESIGNATION DECODER



## B. WHEN ERROR IS DISPLAYED



Refer to the following table while referencing the error identification number shown in the error result to determine and eliminate the cause of the error.

<b>Error identification number</b>	<b>Error Overview</b>	<b>Possible cause</b>	<b>Correspondence</b>
01	Other software is running	Software using VIM such as Techstream is running.	Exit the software using VIM.
02	VIM connect failed	<ul style="list-style-type: none"> <li>The PC and VIM are not connected.</li> <li>The VIM selected in Techstream does not match the VIM that is actually connected.</li> </ul>	<ul style="list-style-type: none"> <li>Checking the VIM connection status.</li> <li>Check the VIM setting of Techstream.</li> </ul>
03	ECU response error	The vehicle is not in IG ON status.	Turn the IG ON.
04	Unaffected vehicle	The connected vehicle is not the model applicable to TSS Check Tool.	-
05			
06			
07			
08			
09			